

## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <a href="http://about.jstor.org/participate-jstor/individuals/early-journal-content">http://about.jstor.org/participate-jstor/individuals/early-journal-content</a>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

# Important Notice

The Mathematical Association of America, like all other organizations of an educational character, gives manifold more than it receives from its constituents. This discrepancy is accounted for by the gratuitous and arduous work given to the Association by its devoted servants.

Since it is impossible to raise the dues above a certain maximum without going beyond the reach of very many of those to whom the Association means most, it seems clear that an endowment fund is the best solution of the difficulty. Now that the Association is incorporated it is legally qualified to administer such a fund.

An endowment is needed not only to prevent a reduction of the number of pages in the Monthly, but also to enable the Association to make just compensation to its servants, and to go forward with its important projects such, for example, as the preparation and publication of a Mathematical Dictionary which is so greatly needed in the English language.

It is believed that, when these conditions are widely known among the friends of mathematics, financial support of this kind will be forthcoming.

#### Legal Form for Gifts and Bequests

I hereby give	1 to the Board of Trustees of	the Mathematical Association of
America the sum of	?	Dollars,
to be known as the.		
	the income only of which may	Fund, and to be used <sup>2</sup> be expended.  nd income may be expended.
Witness:	Signature	

<sup>&</sup>lt;sup>1</sup> In case of a bequest, the first line should read "I hereby give and bequeath," etc.

<sup>&</sup>lt;sup>2</sup> Indicate which one of the two purposes is desired, and omit the other.

#### CONTENTS

Seventh Summer Meeting of the Math By Professor W. D. Cairns	ematical Association of America.
Infinite and Imaginary Elements in Algebra. M. Winger	ora and Geometry. By Professor
Among my Autographs: 26. Burckhardt and the Eternal Proble D. E. Smith	
QUESTIONS AND DISCUSSIONS: New Questions" by Professor E. S. Allen; area of an equilateral triangle" by G. A. Miller	"The formula $\frac{1}{2} a (a+1)$ for the
RECENT Publications: Review by Profeticles in Current Periodicals	ssor A. A. Bennett. Notes. Ar
PROBLEMS AND SOLUTIONS: Problems for 2890, 2892	Solution—2981–2985. Solutions— 
Notes and News	317
EDITORIAL CORRESPONDENCE AND BOOK EDITOR-IN-CHIEF for 1923, W. B. FORD, 20- BUSINESS CORRESPONDENCE should be ad Association, W. D. CAIRNS, Oberlin, Ohio. Seventh Summer Meeting of the Association, U.	4 Mason Hall, Ann Arbor, Mich. dressed to the SECRETARY-TREASURER of the niversity of Rochester, September 6-7, 1922
Seventh Annual Meeting, Harvard University, I The following are dates of Section meetings	
specified):	of the Association in 1922 (unless otherwise
Illinois, Rockford, Ill., April 28–29 Iowa, Des Moines, November 3; Cornell College, Mount Vernon, April 27-28, 1923 Kansas, Topeka, January 21; January 20, 1923	Missouri, Kansas City Junior College, November 18; University of Missouri, Columbia, November 30—December 1, 1923 Оню, Columbus, April 14–15; March, 30–31, 1923
Kentucky, Georgetown College, April 8; University of Kentucky, April, 1923 Maryland-Virginia-District of Columbia, Washington, December 9; Baltimore, May, 1923 Minnesota, St. Paul, June 4, 1921; St. Paul, May 27	ROCKY MOUNTAIN, Greeley, Colo., April 14—15; University of Colorado, April, 1923 SOUTHEASTERN, Atlanta, Ga., April 29; Agnes Scott College, Decatur, Ga., March 10, 1923  Texas, Dallas, November 25, 1921; Houston, December 1–2

# The American Mathematical Monthly

No reprints of articles are furnished to contributors free of charge. Two or three copies of an issue are, however, sent to contributors of longer articles. Orders for reprints, at rates indicated below, should be made when returning galley proof to the Editor-in-Chief.

	4pp.	8pp.	12pp.	16pp.		4pp.	8pp.	12pp.	16pp.
25 copies	\$1.45	\$2.50	\$3.75	\$4.55	100 copies	\$2.35	\$4.05	\$5.70	\$6.80
50 "	1.70	3.00	4.45	5.35	150 "	2.90	4.95	7.05	8.25
75 "	2.05	3.55	5.15	6.00	200 "	3.20	5.40	7.70	9.00

## THE NEW ERA PRINTING COMPANY

## LANCASTER, PA.

Is prepared to execute in first-class and satisfactory manner all kinds of printing and electrotyping. Particular attention given to the work of Schools, Colleges Universities, and Public Institutions.

#### Books, Periodicals

Technical and Scientific Publications

Monographs, Theses, Catalogues

Announcements, Reports, etc.

#### All Kinds of Commercial Work

(Printers of the Bulletin and Transactions of the American Mathematical Society, etc., etc.)

Publishers will find our product ranking with the best in workmanship and material, at satisfactory prices. Our imprint may be found on a number of high-class Technical and Scientific Books and Periodicals. Correspondence solicited. Estimates furnished.

THE NEW ERA PRINTING COMPANY

# The Famous MATHEMATICAL MONOGRAPHS

# MANSFIELD MERRIMAN and ROBERT S. WOODWARD Editors

#### WILEY BOOKS

- No. 1. History of Modern Mathematics. By David Eugene Smith. 81 pages. 6 by 9. Cloth, \$1.25.
- No. 2. Synthetic Projective Geometry. By George Bruce Halstead. 62 pages. 6 by 9. Cloth, \$1.25.
- No. 3. Determinants. By LAENAS GIFFORD WELD. 55 pages. 6 by 9. Cloth, \$1.25.
- No. 4. Hyperbolic Functions. By James McMahon. 76 pages. 6 by 9. Cloth, \$1.25.
- No. 5. Harmonic Functions. By WILLIAM E. BYERLY. 66 pages. 6 by 9. Cloth, \$1.25.
- No. 6. Grassmann's Space Analysis. By EDWARD W. HYDE. 59 pages. 6 by 9. Cloth, \$1.25.
- No. 7. Probability and Theory of Errors. By ROBERT S. WOODWARD. 49 pages. 6 by 9. Cloth, \$1.25.
- No. 8. Vector Analysis and Quaternions. By ALEXANDER MACFARLANE. 50 pages. 6 by 9. Cloth, \$1.25.
- No. 9. Differential Equations. By W. Woolsey Johnson. 72 pages. 9 by 9. Cloth, \$1.25.
- No. 10. Solution of Equations. By Mansfield Merriman. 45 pages. 6 by 9. Cloth, \$1.25.
- No. 11. Functions of a Complex Variable. By THOMAS S. FISKE. 99 pages. 6 by 9. Cloth, \$1.25.
- No. 12. Theory of Relativity. By ROBERT D. CARMICHAEL. 111 pages. 6 by 9. Cloth, \$1.50.
- No. 13. Theory of Numbers. By ROBERT D. CARMICHAEL. 94 pages. 6 by 9. Cloth, \$1.25.
- No. 14. Algebraic Invariants. By Leonard Eugene Dickson. 100 pages. 6 by 9. Cloth, \$1.50.
- No. 15. Mortality Laws and Statistics. By Robert Henderson. 111 pages. 6 by 9. 3 diagrams. Cloth, \$1.50.
- No. 16. Diophantine Analysis. By ROBERT D. CARMICHAEL. 118 pages. 6 by 9. Cloth, \$1.50.
- No. 17. Ten British Mathematicians. By ALEXANDER MACFARLANE. 148 pages. 6 by 9. Cloth, \$1.50.
- No. 18. Elliptic Integrals. By HARRIS HANCOCK. 104 pages. 6 by 9. 20 figures. Cloth, \$1.50.
- No. 19. Empirical Formulas. By Theodore R. Running. 144 pages. 6 by 9. Cloth, \$1.50.
- No. 20. Ten British Physicists. By Alexander Macfarlane. 143 pages. 6 by 9. Cloth, \$1.50.
- No. 21. Dynamics of the Airplane. By Kenneth P. Williams. 138 pages. 6 by 9. 50 figures. Cloth, \$2.50.

There are, of course, many other 'Wiley' books in the field of Mathematics. Send for copies of any of them on Free Examination terms.

## JOHN WILEY & SONS, Inc.,

432 Fourth Avenue

New York City

AMM 10 22